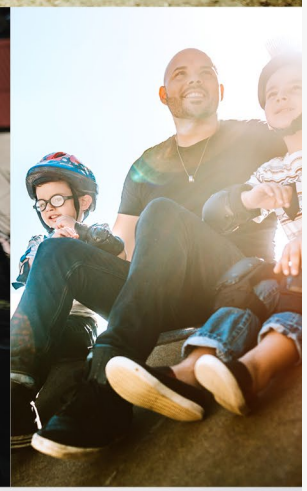










Distribution System Workshop

Distribution System Workshop # 3 | 26 – Oct 22, 2026

Meeting Logistics


Audio


Microphone


Chat box


Video


Raise Hand


Closed Caption

Operating Agreements

Establishing norms with our communities is foundational to building trust

To create a **safe space**, we established **common agreements** such as **respect, honoring diversity of thought**, and **inclusivity**

Practice curiosity and **seek to understand different perspectives**

Stay Engaged

Be Willing To Experience Discomfort

Speak Your Truth Respectfully

Expect and Accept Non-closure

Share the Airtime



The courageous conversations framework
by Glenn Singleton and Curtis Linton

Agenda

1:00 | Welcome & Meeting Logistics

1:05 | Smart Battery Program Journey: From Pilot to Program

2:00 | Energy Trust of Oregon and Customer Battery Adoption

2:25 | Proposed Program Enhancements and Stakeholder Discussion

2:55 | Closing Remarks & Next Steps

3:00 | Adjourn

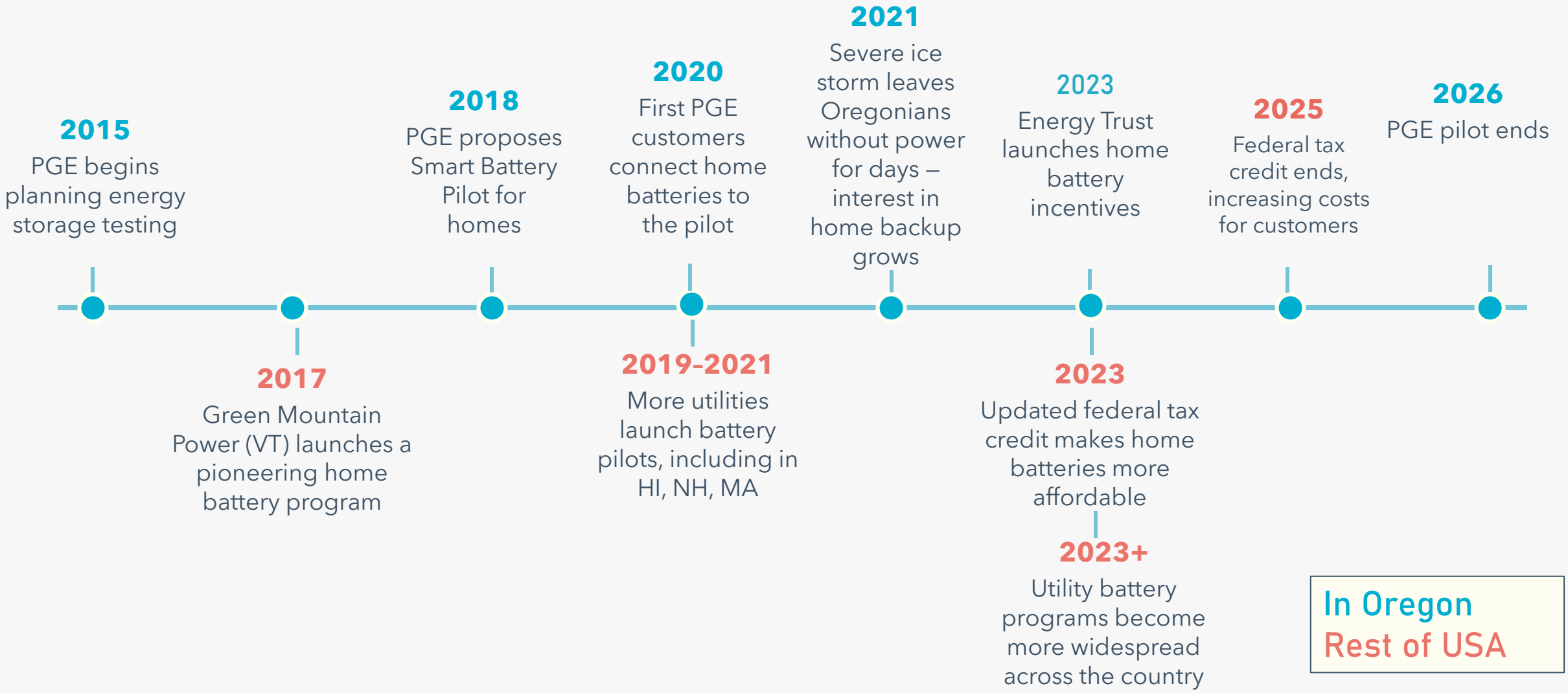
PGE SMART BATTERY PILOT

Where we are today

Pilot progress and the lessons shaping what comes next

How we got here: a decade of change for home batteries

Policy, weather, peer utilities and the home battery market all shaped where the pilot started – and why a lasting program comes next.



PGE Smart Battery Pilot at a glance

Current pilot participation and results

687 customers enrolled

3.0 MW nominated battery capacity

10–15 times batteries support the grid each year

$217 average annual incentive in 2025

81% customer satisfaction (rating of 4 or 5)

Battery adoption is still at the very beginning



0.5% of PGE single-family homeowners have batteries

35% of eligible home battery owners enrolled in the pilot

Connections with other customer offerings

40% of pilot participants also enroll in Time of Day rate

60% of new enrollees receive Energy Trust incentives

The pilot doubled in 2024 and 2025 with tax-credit support, but battery adoption is still in its infancy. Scaling requires sustainable, long-term program design.

What the battery pilot tested and lessons learned

WHAT WE ASKED	WHAT WE LEARNED
Can PGE coordinate home batteries to benefit the grid?	**Yes. Home batteries can work as a group.** PGE can coordinate their stored power to help meet electricity needs.
Will customers share power from their batteries?	**Yes, when backup needs are prioritized.** Customers accept sharing power when PGE balances it with their need for backup in an outage.
Can PGE add more batteries with the tools it has today?	**Yes, for supplying power when needed.** PGE has the tools to add more batteries for this purpose.

Still to learn: **Other ways to use batteries need more testing and system improvements.**

Learning from battery programs across the U.S.

Examples from our review of 25 utility programs across 12 states

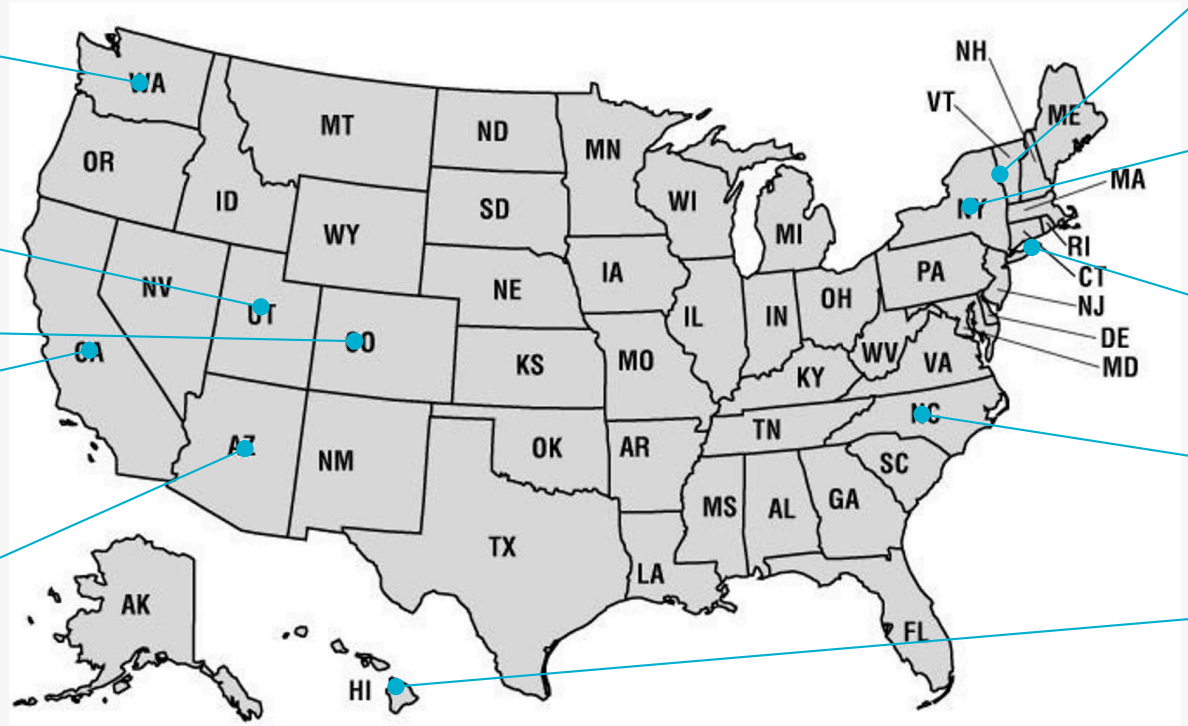
Washington
Puget Sound Energy

Utah
Rocky Mountain Power

Colorado
Xcel Energy

California
PG&E, Southern California Edison, San Diego Gas & Electric

Arizona
Arizona Public Service, Salt River Project, Tucson Electric Power



Vermont
Green Mountain Power

New York
NYSEG, RG&E, National Grid

Connecticut
Eversource, United Illuminating

North Carolina
Duke Energy

Hawaii
Hawaiian Electric

What we learned: Peers call on batteries more often. Many base payments on the power batteries provide. Nonutility funding sometimes pays for upfront incentives, but customers see one coordinated offering.

A balanced approach to home battery programs

Help people buy

Upfront support
Backup at home

+

Pay for shared power

Ongoing rewards
Electricity-system support

=

Balanced approach

Both kinds of support

PGE's best fit depends on partnership with Energy Trust of Oregon

ENERGY TRUST OF OREGON

Existing advice, contractors and incentives

+

PGE

Rewards for sharing stored power

Next: Energy Trust's work to help customers adopt batteries



Energy Trust's battery storage program

Dave McClelland, Sr. Program Manager

10/22/2026

EnergyTrust of Oregon

About us

Independent nonprofit

Serving 2.5 million customers of Portland General Electric, Pacific Power, NW Natural, Cascade Natural Gas and Avista

Providing access to affordable energy

Generating homegrown, renewable power

Building a stronger Oregon and SW Washington



Energy Trust renewable energy programs

- Public purpose funded, serving customers of Portland General Electric and Pacific Power
- Support for a portfolio of clean energy systems, including solar + storage, biopower and hydro
- Investments in over 35,000 solar electric systems and 2,000 battery storage systems for Oregon households and businesses
- Customer and industry support: project development assistance, trade ally network, customer education and marketing, lead generation, consumer protection, quality management

HB 3141: Public Purpose Modernization

In 2021, the Oregon legislature refined the renewable energy public purpose fund, adding:

- **25% income-qualified requirement**

  25% of our renewable energy funding must be invested to serve households with low or moderate incomes

- **Battery storage and related technologies,** "customer investments in distribution system-connect technologies that support reliability, resilience and the integration of renewable energy resources"

  Oregon Public Utility Commission defined this as customer-sited grid-interactive batteries and smart inverters

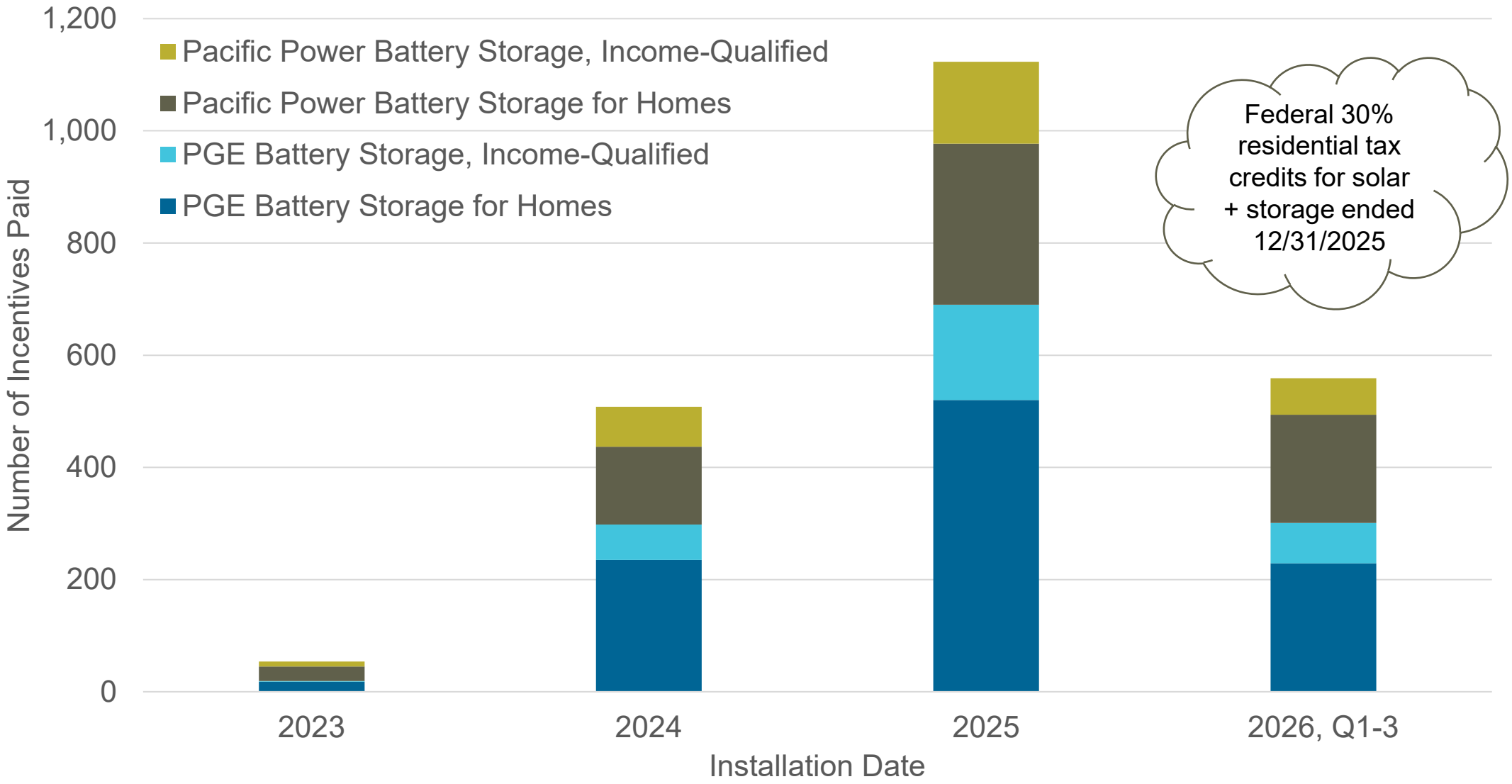


Current Energy Trust solar + storage offerings*

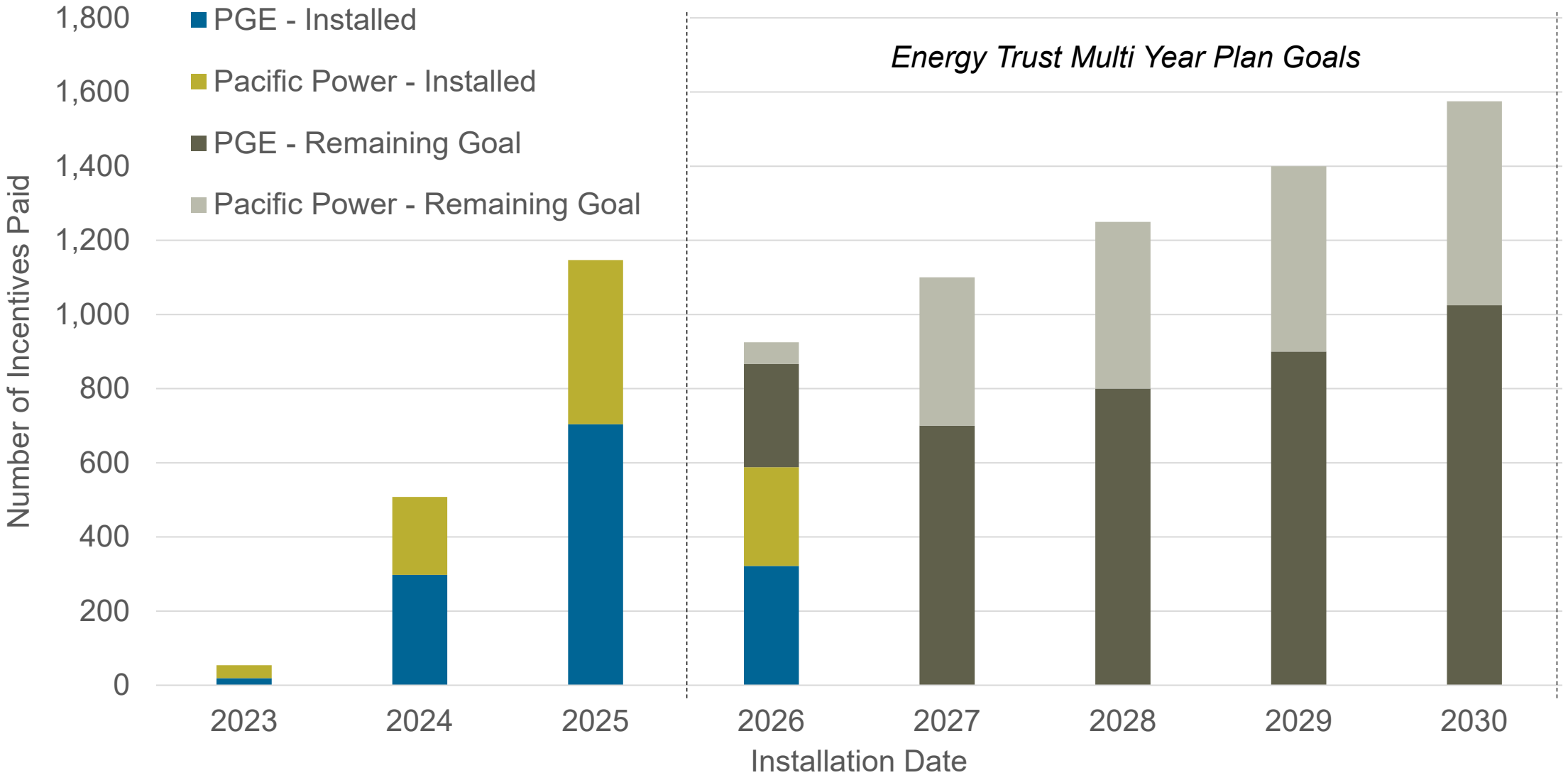
2026 Incentives	Portland General Electric	Pacific Power
Solar for Homes	$3,500 (flat)	$2,500 (flat)
Battery Storage for Homes (Since 2023)	$400/kWh up to $5,000	$240/kWh up to $3,000
Solar Within Reach	$1.25/W up to $7,500	$0.75/W up to $4,750
Battery Storage (Income-Qualified) (Since 2023)	$500/kWh up to $6,250	$360/kWh up to $4,500
Solar for Businesses	$0.10/W up to $9,000	$0.10/W up to $9,500
Battery Storage for Businesses (Since 2024)	$300/kWh up to $9,000	$300/kWh up to $9,000
Solar Development Assistance	100% up to $2,000	100% up to $2,000
Battery Storage Development Assistance (Since 2024)	100% up to $3,000	100% up to $3,000

**Additional incentives available for custom projects and specific priority customer groups (links for more incentive information at the end)*

Strong battery growth impacted by loss of tax credits



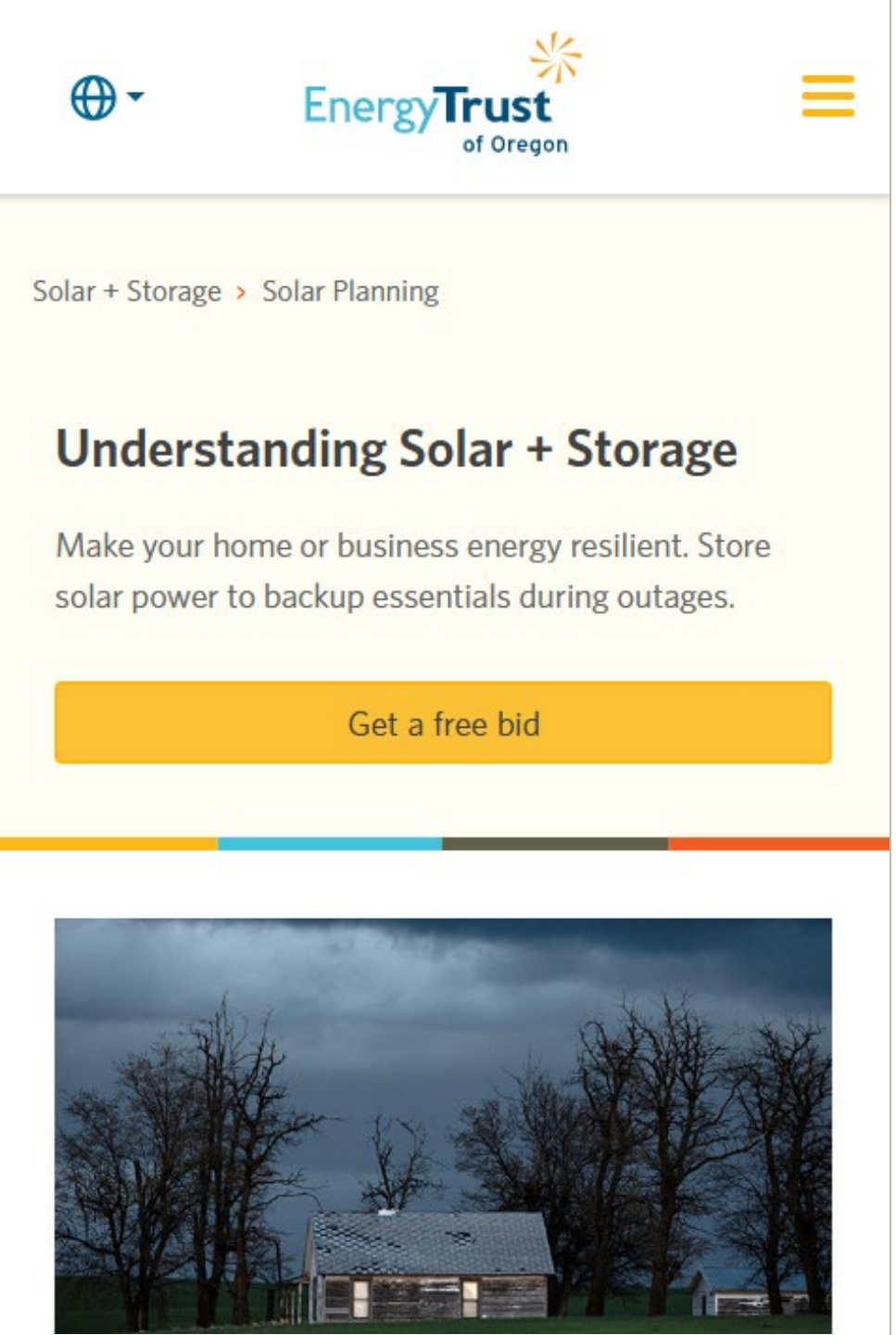
5-year goal to install 6,250 battery systems



Battery program evolution

- Most battery customers are motivated by backup power needs. We've heard concerns that batteries may be sitting fully charged waiting for an outage.
- Our program takes a customer-centric approach. We see value in working with utility programs to better align customer interests (backup power, savings opportunities) with utility interests (peak management, grid services).
- Focus in 2027 will be alignment with utility programs on clear messaging for our shared battery customers: what are the good, better and best opportunities for our customers?





Learn more about our solar + storage programs

energytrust.org: Understanding Solar + Storage
(links to PGE and Pacific Power battery programs)

Solar + Storage Home
(dropdown for incentives by customer type)

Solar + Storage: Get a free bid

Solar + Storage Market Summary Report
(volume & cost data)

Related topics that I didn't cover today:

Custom Energy Resilience Solutions

Portland Solar Access Program

EnergyTrust of Oregon



Thank you!

Dave McClelland
Sr. Program Manager – Renewable Energy
david.mcclelland@energytrust.org

PGE SMART BATTERY PILOT

Where we are going

Program proposal and next steps

What's next for the Smart Battery pilot?

The Smart Battery pilot was a test. A program is a permanent offer customers can count on.

	PILOT A limited test, with a set end date, of an idea that could work at a larger scale. It doesn't have to pay for itself yet – but it must show a credible path to doing so.	**PROGRAM** A lasting offering that benefits participants and all PGE customers – delivered at scale, with stable day-to-day operations and proven value.
WHY IT EXISTS	Test whether home batteries could help the grid during peak demand.	Use them as a dependable, everyday part of how we serve customers.
WHO CAN JOIN	A small, capped group of battery owners.	Open to more customers – including small businesses – with qualifying batteries.
HOW IT WORKS	Many choices and settings, adjusted as we learned.	One simple, standard offer that is easy to understand and budget for.
HOW LONG IT LASTS	A time-limited trial with a defined end date.	An ongoing offering within PGE's program portfolio.

Why we're ready now: The pilot answered its questions – customers enrolled, batteries performed and satisfaction is high. What's left isn't learning, it's scaling. We propose beginning the transition in Q2 2027.

Smart Battery: proposed changes and timing

Keep what works in the pilot. Make the ongoing program ***simpler*** and ***easier*** to join.

WHAT WOULD CHANGE

More customers
Include small businesses with qualifying batteries.

One simple sharing level
Share 80% of capacity, keeping at least 20% for backup.

Rewards for the power provided
Pay based on monthly performance, with at least two events per month.

A coordinated customer experience
Work with Energy Trust on advice, incentives and clear information.

PROPOSED TIMING

Nov–Dec 2026
Incorporate stakeholder feedback.

January–March 2027
File updated program rules (Schedule 14).

April–June 2027
Begin the transition from pilot to program.

Target timing, not a confirmed launch.

Current customer journey

BIGGEST OPPORTUNITY: PGE SUPPORT BEFORE THE INSTALLATION DECISION

Equip trade allies earlier as they continue to lead the customer relationship.

1 Consider a battery
Customer explores whether a battery is right for them.

2 Decide with a trade ally
Customer meets a trade ally and decides whether to install.

3 Apply for incentives
Trade ally applies to Energy Trust on the customer's behalf.

4 Interconnection
Trade ally submits the net metering application.

5 Smart Battery invite
PGE emails an invitation after application approval and permission to operate, if the installed battery qualifies.

6 Complete enrollment
Interested customers complete Smart Battery enrollment.

7 Review and approve
Smart Battery reviews and approves enrollment.

8 Participate and earn
Customer joins Smart Battery events and earns rewards.

Reimagining the customer journey

Today, buying a battery means navigating two organizations on your own. Going forward, the hand-off disappears.

ENERGY TRUST Helps you get the battery

- Advice and education before you buy
- Connect you with qualified contractors in your area
- Upfront rebates that lower the price of solar and battery

+

PGE Helps your battery keep paying off

- Rewards for sharing power when the grid needs it
- Steady pay-for-performance earnings
- A more reliable grid for every customer

NEW — BUILT TOGETHER: PGE and Energy Trust will jointly develop plain-language education tools for trade allies to use when they talk with customers about the benefits of batteries and program options that meet battery customers' needs.

= **One seamless experience** – a single, clear path from deciding to buy, to getting paid for helping the grid.

Why it matters: With Energy Trust leading the upfront offer, PGE can put program dollars where customers see ongoing value – rewarding the grid benefits their battery delivers.

Feedback

A) Trade ally support: what would help most?

Help trade allies educate battery shoppers and connect them to Smart Battery.

Rank the strategies: 1 = highest priority, 5 = lowest priority

Use each rank once, with no ties. These are ideas for discussion, not commitments.

Strategy	What trade allies could use	Your rank
Plain-language tools	A joint guide to monthly rewards, backup and program rules.	1 2 3 4 5
Short training	Practice explaining Smart Battery and answering questions.	1 2 3 4 5
Customer examples	Examples of monthly rewards and how backup is protected.	1 2 3 4 5
Incentive calculator	A tool to estimate monthly performance rewards.	1 2 3 4 5
Sign-up guidance	A checklist for qualifying batteries and enrollment steps.	1 2 3 4 5

Why is your top choice most useful?

1. What customer question would it help answer?
2. What is missing from this list?

B) Joining the program: where is the friction?

Rate how easy each step is, then tell us where friction is and who can fix it.

1 Very difficult 2 Difficult 3 Neutral 4 Easy 5 Very easy

Rate each step from a customer perspective. Choose N/A if you lack direct experience.

Joining step	What the customer experiences	Your rating
Learn about the program	PGE invites eligible customers after interconnection.	1 2 3 4 5 N/A
Check eligibility	The battery must be on PGE's qualifying product list.	1 2 3 4 5 N/A
Complete enrollment	Customer enrolls, then PGE reviews and approves.	1 2 3 4 5 N/A
Choose sharing level	Customer sets shared capacity; the rest stays for backup.	1 2 3 4 5 N/A

Where is the biggest friction, and how do we fix it?

1. Which step is hardest, and what barrier does the customer face?
2. What specific change would fix it?

C) Clear information: what would help customers?

Rate how helpful each channel is, then suggest a better message or channel.

1 Not helpful 2 Slightly helpful 3 Moderately helpful 4 Helpful 5 Very helpful

Rate each row from a customer perspective. Choose N/A if you need more information.

Channel	What customers received	Your rating
Interconnection	PGE shared the offer as customers connected their batteries.	1 2 3 4 5 N/A
Website	A qualifying product list showed which batteries could join.	1 2 3 4 5 N/A
Pre-event email	PGE sent notice 24 hours ahead, with an option to opt out.	1 2 3 4 5 N/A
Manufacturer app	Customers could receive event notices and override settings.	1 2 3 4 5 N/A
Trade ally advice	Trade allies and Energy Trust advised buyers up front.	1 2 3 4 5 N/A

What specifically would you change?

For a low-rated channel, what message or tool would you change? Specify the audience and how it would explain options, monthly rewards or backup protection.



Questions/ Comments



Next Steps and Closing Remarks

Closing Remarks

PGE VPP Multi-Year Plan Docket UM 2197 Procedural Schedule

Meeting materials and recording will be posted to our Plan's Engagement webpage at Plans Engagement | Portland General Electric

For more information or if you have questions, please email us at dsp@pgn.com

Thank You for your participation in our plans

Let's meet the future together.